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Effect of silver nanoparticles orally consumption on blood biochemical factors in male rats

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Abstract

Background: *Salvia nanoparticles have many biological effects. In this study the effect of silver nanoparticles are examined on the serum concentrations of glucose, triglyceride levels and the activity of aspartate amino transferase and alanine amino transferase enzymes in male rats.*

Materials & methods: *30 Male Wistar rats weighing 150 to 180 g were divided in 3 groups, including: control, first experimental group [ppm 30 of silver nanoparticles] and the second experimental group [ppm 60 of silver nanoparticles]. In the end of treatment the animals were anesthetized and blood samples were taken directly from the heart and biochemical parameters in serum were measured after blood centrifugation. Data were analyzed using one-way ANOVA and Tukey test and ($p < 0.05$) was considered significant.*

Results: *Serum levels of glucose, aspartate aminotransferase and alanine aminotransferase of male rats that treated with different doses of silver nanoparticles had no significant changes in comparison to control group. The use of silver nanoparticles in both doses of 30 and 60 ppm significantly decreased the serum triglyceride levels in rats.*

Conclusions: *The silver nanoparticles may be harmless for the liver at low amount, and it could be used in the treatment of hyperlipidemia.*

Keywords: *Silver nanoparticles, Rats, Alanine aminotransferase, Aspartate aminotransferase, Triglycerides, Blood sugar*

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